UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/754,394	01/05/2001	Tomoyuki Nishimura	Q62564	3829

7590 05/25/2004

SUGHRUE, MION, ZINN, MACPEAK & SEAS, PLLC
2100 Pennsylvania Avenue, N.W.
Washington, DC 20037-3202

EXAMINER	
SELBY, GEVELL V	

ART UNIT	PAPER NUMBER
2615	7

DATE MAILED: 05/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/754,394	Applicant(s) NISHIMURA, TOMOYUKI	
	Examiner Gevell Selby	Art Unit 2615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *2/23/04*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☑ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Applicants' response remarks are persuasive in regard to the double patenting objection and overcome an objection to claim 16, should claim 8 be allowed.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-12 and 14-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Keiji et al., JP 05-181050.

In regard to claim 1, Keiji et al., JP 2894659, discloses lens moving mechanism comprising:

(a) a detection part for detecting a plurality if reflectivities (see figure 1, element 6 and paragraph 12);

(b) a state indication part (see figure 1, element 6) having arranged in order thereof first (see figure 3, element A) second (see figure 3, element B) and third (see figure 3, elements B and C in combination) areas, said first area, including a first reflecting part (first reflecting part or ratio at α, see paragraph 12 and figure 3) and a third reflecting part (third reflecting part of ratio at γ, see paragraph 12 and figure 3), each repeatedly provided for indicating a first state to

said detection part, said second area, including said first reflecting part and a second reflecting part (second reflect part or ratio at β, see paragraph 12 and figure 3) , each repeatedly provided for indicating a second state to said detection part, and said third area, including said second reflecting part and said third reflecting part, each repeatedly provided for indicating the first state to said detection part;

[The zoom information detection means can indicate the state depending on the count.]

(c) a drive part (see figure 1, element 1and detailed description paragraph 8) for moving said detection part, relative to said state indication part, in a direction thereof; and

(d) an identification part for identifying a position (see figure 1, element 4 and detailed description paragraph 8) of the lens based upon a change of reflectivity along a sequence of indication of said first area and said second area and said third area of said state indication part to said detection part.

In regard to claim 2, Keiji et al., JP 2894659, discloses the lens moving mechanism of claim 1 further comprising:

a count part (see figure 1, element 3 and element 4 and detailed description paragraph 8) for determining a count based upon said movement by said drive part; said identification part identifying said position of the lens based upon one or more of said sequence of indication, said count by said count part, and said direction of movement by said drive part.

In regard to claim 3, Keiji et al., JP 2894659, discloses the lens moving mechanism of claim 1 wherein:

said drive part moves said detection part, relative to said state indication part, from said first area in a direction toward said third area when said state indication part indicates the first state to said detection part (see detailed description paragraph 34);

[When powered on the drive part moves the lens from the first area to the second area.]

and upon movement of said detection part to a position of predetermined distance, said identification part identifies that (a) said detection part detected the first area before moving said predetermined distance when said detection part detects the second state and

[Lens moves from first state to second state when turned on.]

(b) said detection part detected the third area before moving said predetermined distance when said detection part does not detect the second state (see detailed description paragraph 12).

[The lens moves from third area to a collapsed position in first area when turned off.]

In regard to claim 4, Keiji et al., JP 2894659, discloses a moving mechanism comprising:

(a) a detection part (see figure 1, element 6) for detecting one of a first state and a second state;

(b) a state indication part (see figure 1, element 6) having arranged in order thereof first (see figure 3, element A) second (see figure 3, element B) and third (see figure 3, elements B and C in combination) areas, said first area, including a first reflecting part (first reflecting part or ratio at α, see paragraph 12 and figure 3) and a third reflecting part (third reflecting part of ratio at γ, see paragraph 12 and figure 3), each repeatedly provided for indicating a first state to said detection part, said second area, including said first reflecting part and a second reflecting part (second reflect part or ratio at β, see paragraph 12 and figure 3) , each repeatedly provided for indicating a second state to said detection part, and said third area, including said second reflecting part and said third reflecting part, each repeatedly provided for indicating the first state to said detection part; and

[The zoom information detection means can indicate the state depending on the count.]

(c) a drive part (see figure 1, element 1) for moving said detection part in a relative manner to said state indication part, wherein an area of movement in which said detection part moves in a normal usage state (tele or wide photographing modes) includes the first area, the second area, and a portion of the third area (see figure 3, A, B and Section of C before gamma);

a movable area (see figure 3 section of C after gamma), in which said detection part is movable but does not move in said normal usage state (The

detection part does not move when the camera is capturing an image, is provided outside said portion of the third area included in said movement area; and

the width of the movable area is more than the width of the first area (see figure 3: The third area, B and C in combination, is wider than the first area, section A.).

In regard to claim 5, Keiji et al., JP 2894659, discloses the moving mechanism of claim 4 further comprising:

an identification part for identifying an area to be detected; when said state indication part indicates the first state to said detection part said drive part moves said detection part, relative to said state indication part, in a direction of the third area from the first area, and upon movement of said detection part to a position of predetermined distance (see detailed description paragraph 34),

[When powered on, the identification part determines the first state and the drive part moves the identification part from the first area to the second area.] said identification part identifies that

(a) said detection part detected the first area before moving the predetermined distance when said detection part detects the second state and

[When powered on the drive part moves the lens from the first area to the second area.]

(b) said detection part detected the third area before moving the predetermined distance when said detection part does not detect the second state.

[The lens moves from third area to a collapsed position in first area when turned off.]

In regard to claim 6, Keiji et al., JP 2894659, discloses all the moving device of claim wherein:

said first, second, and third reflecting parts each have two or more different reflecting ratios arranged repeatedly in a direction said detection part moves (see detailed description paragraph 12); and

said state indication part includes a count part (count means 3) for counting a number of times the two or more different reflecting ratios repeat when said detection part moves (see paragraph 8); and

said identification part recognizes the predetermined distance using the number counted by said count part (see paragraph 8).

In regard to claim 7, Keiji et al., JP 2894659, discloses a lens mirror body with a moving mechanism for moving a lens part in a first, second, and third areas, comprising:

(a) a drive part for moving said lens (see figure 1, element 1); and

(b) a state indication part (see figure 1, element 6) having arranged in order thereof first (see figure 3, element A) second (see figure 3, element B) and third (see figure 3, elements B and C in combination) areas, said first area, including a first reflecting part (first reflecting part or ratio at α, see paragraph 12 and figure 3) and a third reflecting part (third reflecting part of ratio at γ, see paragraph 12 and figure 3), each repeatedly provided for indicating a first state to said detection part, said second area, including said first reflecting part and a

second reflecting part (second reflect part or ratio at β, see paragraph 12 and figure 3) , each repeatedly provided for indicating a second state to said detection part, and said third area, including said second reflecting part and said third reflecting part, each repeatedly provided for indicating the first state,

said state indication part indicating the first state when said lens part is positioned in the first and third areas (when in sections A or C) and indicating the second state when said lens part is positioned in the second area (when in section B),

wherein an area of movement of said lens part during a normal usage state (tele or wide photographing modes) includes the first area, the second area, and a portion of the third area (sections A, B, and part of C up to gamma);

a movable area where said lens part is movable but said lens part does not move while photographing is provided in the third area;

[The lens moves through an area of the third area to get to gamma, stops and does not move when photographing or the picture will be blurred.]

and the width of the movable area is more than the width of the first area

[The width of B and part of C up to gamma is larger than section A].

In regard to claim 8, Keiji et al., JP 2894659, discloses in combination, an image device and a movable lens part (see figure 4), comprising:

(a) a detection part (see figure 1, element 6) for detecting one of a first state and a second state;

(b) a state indication part (see figure 1, element 6) having arranged in order thereof first (see figure 3, element A) second (see figure 3, element B) and third (see figure 3, elements B and C in combination) areas, said first area, including a first reflecting part (first reflecting part or ratio at α, see paragraph 12 and figure 3) and a third reflecting part (third reflecting part of ratio at γ, see paragraph 12 and figure 3), each repeatedly provided for indicating a first state to said detection part, said second area, including said first reflecting part and a second reflecting part (second reflect part or ratio at β, see paragraph 12 and figure 3) , each repeatedly provided for indicating a second state to said detection part, and said third area, including said second reflecting part and said third reflecting part, each repeatedly provided for indicating the first state to said detection part; and

(c) a drive part (see figure 1, element 1) for moving said detection part, relative to said state indication part, in two or more areas among the first, second, and third areas and driving said lens part therewith.

In regard to claim 9, Keiji et al., JP 2894659, discloses the combination of claimed in claim 8 further comprising:

an identification part (see figure 1, element 4 and detailed description paragraph 8) for recognizing a moving direction between a movement in a direction of the third area from the first area and a reverse direction thereto, when the state changes from the second state to the first state, and for identifying an area which said detection part detects based on a result of said recognition.

In regard to claim 10, Keiji et al., JP 2894659, discloses the combination of claim 9 wherein,

the drive part moves said detection part, relative to said state indication part, in a direction of the third area from the first area, when said state indication part indicates the first state to said detection part, and when said detection part has moved to a position of predetermined distance (see detailed description paragraph 34), said identification part identifies that (a) said detection part detected the first area before moving the predetermined distance when said detection part detects the second state and (see detailed description paragraph 34) (b) said detection part detected the third area before moving the predetermined distance when said detection part does not detect the second state (see detailed description paragraph 12).

[When powered on, the identification part determines the first state and the drive part moves the identification part from the first area to the second area. The lens moves from third area to a collapsed position in first area when turned off.]

In regard to claim 11, Keiji et al., JP 2894659, discloses the combination of claim 10 wherein:

said first, second, and third reflecting parts having corresponding two or more different reflecting ratios arranged repeatedly in a direction said detection part moves;

said state indication part includes a count part (count means 3) for counting a number of times the two or more different reflecting ratios repeat when said detection part moves (see paragraph 8);

and said identification part recognizes the predetermined distance using the number counted by said count part (see figure 3 and paragraph 8).

In regard to claim 12, Keiji et al., JP 2894659, discloses the combination of claim 11 further comprising:

a reference value setting part (see figure 1, element 5) for setting, in advance, a reference value in said count part at the time said detection part moves and said detection part changes from the first state to the second state and from the second state to the first state; and for setting the reference value as a number counted by said count part when a state which said detection part detects changes (see detailed description paragraph 8).

In regard to claim 14, Keiji et al., JP 2894659, discloses the combination of claim 8 wherein,

an area of movement of said lens part in a normal usage state includes the first area, the second area, and a portion of the third area;

a movable area where said lens part is capable of moving but said lens part does not move while photographing is provided in the third area;

[It is inherent not to move the lens when photographing or the picture will be blurred]

and a width of the movable area is more than a width of the first area.

[The width of B and part of C up to gamma is larger than section A]

In regard to claim 15, Keiji et al., JP 2894659, discloses the combination of claim 8 wherein,

a withdrawn position of said lens part is located at one of a boundary position between the first area and the second area and a vicinity thereof (see figure 3, element alpha), and

a photographing preparation position of said lens part in preparation for photographing is located at one of a boundary position between the second area and the third area and a vicinity thereof (see figure 3, element gamma).

In regard to claim ~~8~~ 16, Keiji et al., JP 2894659, discloses in combination, an image device and a movable lens part (see figure 4), comprising:

(a) a detection part (see figure 1, element 6) for detecting one of a first state and a second state;

(b) a state indication part (see figure 1, element 6) having arranged in order thereof first (see figure 3, element A) second (see figure 3, element B) and third (see figure 3, elements B and C in combination) areas, said first area, including a first reflecting part (first reflecting part or ratio at α, see paragraph 12 and figure 3) and a third reflecting part (third reflecting part of ratio at γ, see paragraph 12 and figure 3), each repeatedly provided for indicating a first state to said detection part, said second area, including said first reflecting part and a second reflecting part (second reflect part or ratio at β, see paragraph 12 and

figure 3) , each repeatedly provided for indicating a second state to said detection part, and said third area, including said second reflecting part and said third reflecting part, each repeatedly provided for indicating the first state to said detection part; and

(c) a drive part (see figure 1, element 1) for moving said detection part, relative to said state indication part, in two or more areas among the first, second, and third areas and driving said lens part therewith.

In regard to claim 17, Keiji et al., JP 2894659, discloses a position detection method for detecting a position of a movable lens part in a lens mirror body, comprising the steps of:

~~In regard to claim 8, Keiji et al., JP 2894659, discloses in combination, an image device and a movable lens part (see figure 4), comprising~~:

(a) moving the lens part in two or more areas among a first area (see figure 3, element A), including a first reflecting part (first reflecting part or ratio at α, see paragraph 12 and figure 3) and a third reflecting part (third reflecting part of ratio at γ, see paragraph 12 and figure 3), each repeatedly provided for indicating a first state, a second area (see figure 3, element B), including said first reflecting part and a second reflecting part (second reflect part or ratio at β, see paragraph 12 and figure 3) , each repeatedly provided for indicating a second state, and a third area (see figure 3, elements B and C in combination), second reflecting part and said third reflecting part, each repeatedly provided for indicating the first state;

(b) detecting the first state and the second state during said moving step; and when the second state is changed to the first state in said detecting step (see detailed description paragraph 12):

[The change in states is detected when moving from the first state to the second state when the power is turned on.]

(c) recognizing a moving direction of said lens between a direction towards the third area from the first area and a reverse direction thereto (see detailed description paragraph 8); and

[Moving towards the third area is recognized by counting up and moving away is recognized by counting down]

(d) identifying an area detected prior to said moving step based on a result of said recognizing step (see detailed description paragraph 8).

[The zoom information detection means recognized the area by the count and then can determine the state.]

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Keiji et al., JP 05-181050 in view of Miyazwa et al., US 4,942,417.

In regard to claim 13, Keiji et al., JP 2894659, discloses the combination of claim 11, wherein said count part (count means) starts to count at the time said detection part returns to the position in which the state changes (The state changes at angle edges: see paragraph 8.), but lacks low speed control of the zoom motor so the detection part returns to a position in which the state changes at a lower speed than a moving speed towards the predetermined distance if said detection part changes from the first state to the second state and from the second state to the first state when said lens part moves in a predetermined direction.

Miyazwa et al., US 4,942,417, discloses a powered zoom camera with a lens moving mechanism the has two control circuits for the zoom motor, one for high speed movement and one for low speed movement so the photographer can carry out slow zooming(see column 5, lines 63-68 and column 6, lines 1-15). Miyazwa discloses in column 5, line 65 to column 6, line 15 that there are different zoom speeds for tele (zoom up) and wide (zoom-doom) zooming.

It would have been would have been obvious to a person skilled in the art at the time of invention to modify Keiji et al., JP 2894659, in view of Miyazwa et al., US 4,942,417, to have low speed control circuitry so that the detection part returns to a position in which the state changes at a lower speed than a moving speed towards the predetermined distance if said detection part changes from the first state to the second state and from the second state to the first state when said lens part moves in a predetermined direction, and said count part starts to count at the time said detection part returns to the position in which the state changes in order to do slow zooming.

Response to Arguments

6. Applicant's arguments filed 3/3/04 have been fully considered but they are not persuasive to overcome any of the rejections.

Examiners response:

Applicants contend that 1) Keiji fails to disclose or suggest a state indication part, having three areas, a first area formed from a first reflecting part and a third reflecting part, a second area formed from the first reflecting part and a second reflecting part, and a third area, formed from the second reflecting part and the third reflecting part; 2) Keiji fails to disclose or suggest a count part which counts the number of times two or more reflecting ratios repeat within first second, and third reflecting parts, in order to measure the movement of a detection part; 3) Miyazawa does not teach using a low speed when a detection part changes from a first state to a second state and from a second state to a first state when a lens part moves in a predetermined direction. 4) Keiji and Miyazawa fail to teach the count part starts to count at the time said detection part returns to the position in which the state changes. The examiner disagrees.

Re item 1) The Keiji reference discloses a photograph reflector 11 with a first reflecting part or ratio at α, a second reflect part or ratio at β, and a third reflecting part of ratio at γ (see paragraph 12 and figure 3). When the lens moves from the third reflecting part at γ in the third area C to the first reflecting part at α in the first area A, this indicates to the detection means 4 the lens has reached the first state, high reflection factor, and the camera can power off. When the lens moves from the first reflecting part at α in the first area A to the second reflecting part at β in the second area B, this indicates to the detection means 4 the lens has reached the second

state, low reflection factor, after the camera is powered on (see paragraph 34). When the lens moves from to the second reflecting part at β in the second area B to the third reflecting part at γ in the third area C, this indicates to the detection means 4 the lens is in the first state (see paragraph 72).

Re item 2) The Keiji references discloses a count means 3 that adds or subtracts the pulse signal that changes near the wide angle edge, where the reflecting part changes from first to second or the reverse, and near the tele angle edge where the reflecting part changes from second to third or the reverse (see paragraph 8).

Re item 3) Miyazwa discloses in column 5, line 65 to column 6, line 15 that there are different zoom speeds for tele (zoom up) and wide (zoom-doom) zooming. Therefore, the combination of Keiji in view of Miyazawa discloses the detection part returns to a position in which the state changes at a lower speed than a moving speed towards the predetermined distance if said detection part changes from the first state to the second state and from the second state to the first state when said lens part moves in a predetermined direction.

Re item 4) The Keiji reference discloses the count means starts to count at the time said detection part returns to the position in which the state changes as at the wide angle edge where the state changes from first to second or the reverse , and near the tele angle edge where the reflecting part changes from second to first or the reverse (see paragraph 8).

Conclusion

1. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gevell Selby whose telephone number is 703-305-8623. The examiner can normally be reached on 8:00 A.M. - 5:30 PM (every other Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's primary, Vu Le can be reached on 703-308-6613. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

gvs

NGOC-YEN VU
PRIMARY EXAMINER